Native Prairie STEWARDSHIP

MANAGING PRAIRIE WETLANDS

FACT SHEET

North America's prairie grasslands began in areas with distinct seasonal variations in temperature, in the heart of our continent. The remaining patches of prairie hold an enormous diversity of life ... countless species of grasses, herbs, mosses, birds, mammals, amphibians, insects. Water in the low areas and in the ground refreshes the life there.

Much of Saskatchewan's native prairie is found in the semi-arid rangelands of southwestern Saskatchewan. Grassy areas such as these are dotted with potholes or sloughs, especially in the Missouri Coteau.

The very presence of wetlands in range areas can be ideal places to begin planning for grazing and watering systems. Planned grazing on Saskatchewan's prairie landscape will improve the condition of the grasses, enhance water quality and wetland vegetation, and set the stage for livestock growth and healthy cattle.

Saskatchewan wetlands, often known as sloughs, potholes or marshes, are low-lying areas of land that collect water often enough to support aquatic plants and wildlife. Their water levels and vegetation vary with the seasons and precipitation.

Natural vegetation around a prairie slough consists of those grasses and sedges best suited for conditions and growth in low-lying, frequently wet areas. With some planning and management, these areas will improve water quality, pasture health and provide considerable benefits to livestock.

Tips and techniques

The following management tips will improve both the grass and water in your prairie livestock grazing area.

The wet zone

Surface water in prairie sloughs is an excellent source of clean water for livestock, crop irrigation and spraying or even to fill dugouts.

Fence around a slough or waterway to prevent cattle from entering the water and destroying the structure of the soil around the basin. Cattle trample the spongy edges of the basin, disturb the plants and water, then drop their wastes in the slough water they drink.

To entice livestock away from a slough, place an alternate watering spot close to the wetland, but make it more convenient for the cattle to drink from this source, instead of the wetland. Build your alternate water source with a firm, dry base to entice cattle to access the water and to improve pasture grazing management. Place a thick (2-3 foot) layer of crushed rock or compacted pit run gravel, sloped 1:6 (rise/run) around the water trough.

If fencing a wetland is not possible, reduce the time and possibly the number of animals grazing the area to help maintain a healthy, productive plant community.

If livestock must drink from a wetland, establish a surface access ramp of concrete, gravel or wood to help animals reach the water.

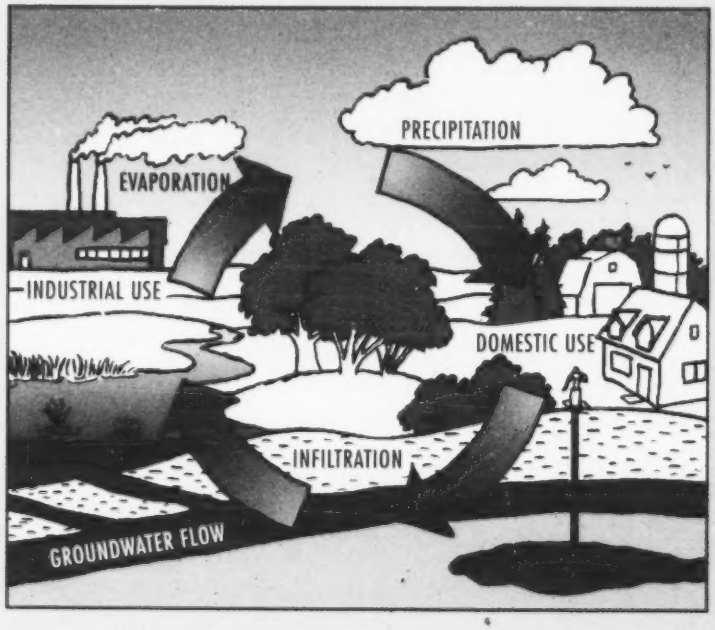
Consider drainage patterns in the area where you plan to build your livestock corral. Be sure to situate your corral where it will not drain to a slough, stream or other water source, as nitrates and other nutrients may contaminate the water.

Winter-graze prairie sloughs. Wetlands, especially those spanning at least a few acres, are more suited for livestock grazing in dormant seasons (late fall to early spring), as the vegetation around these wetlands is usually taller and more dense than in nearby upland areas.

Overall, try to avoid draining or filling wetlands. The adjacent soil will dry, groundwater supplies will diminish and long-term precipitation will decrease with no wetland evaporation.

The water re-cycle

All of the water on our planet is part of a hydrologic, or water cycle. It's a tight system: as it circulates, the water is distributed to earth, up to the earth's atmosphere and back again to the earth. Energy from the sun stimulates the process of evaporation. What was once water in a slough becomes vapour and clouds in the atmosphere. Eventually these clouds condense and fall back to earth as precipitation. Some water from precipitation percolates into the soil, contributing to groundwater, which again surfaces in other low-lying areas.



The buffer zone

Management tips for the buffer zone apply to both native prairie and cultivated wetland areas. Here are some.

Keeping enough vegetative cover around the basin results in peak performance—both in water quality and quantity—for surface and groundwater. The ideal width of vegetation around a slough is 10 metres (30 feet) and the vegetation may well begin in the water. On cultivated land you could consider squaring a wetland, especially if it is near a corner or edge of your field, to make it easier to maneuver farm machinery in the area.

By keeping sufficient grasses around your prairie slough, you keep the salts in the ground. Vegetation around wetlands holds the water that contains salts in the ground and not the soil's surface. "Bathtub ring" around

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wetland basins would appear less often.

Avoid excessive fertilizing around the perimeter of wetlands. These areas may have gathered considerable nutrients from runoff, and increased fertilizer may temporarily increase salinity and inhibit germination.

Spike-rushes, sedges, spangletop and other lush grasses that grow around sloughs are excellent forage for grazing livestock or baling in mid-summer.

For more information on prairie wetland management, contact your nearest extension agrologist, Ducks Unlimited Canada, Sask Water, Saskatchewan Environment and Resource Management,

or

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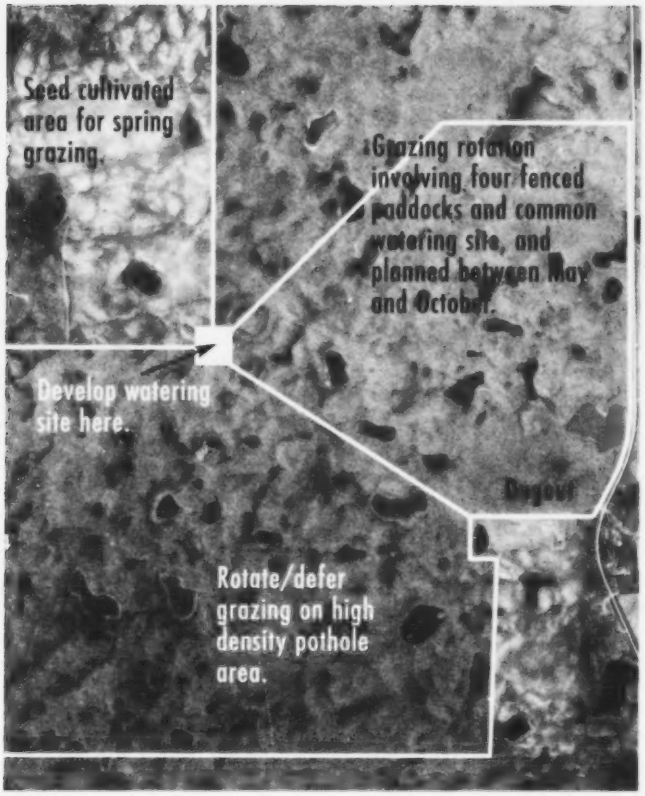
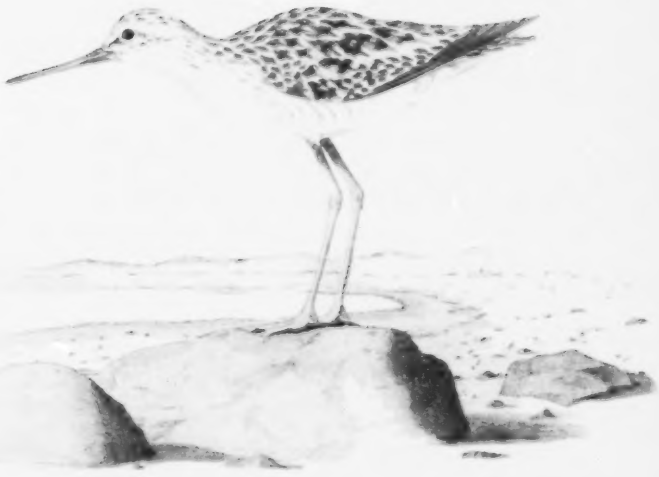

Seed cultivated area for spring grazing.
Grazing rotation involving four fenced paddocks and common watering site, and planned between May and October.
Develop watering site here.
Dugout
Rotate/defer grazing on high density pothole area.

Planned grazing on aerial photo.



Lesser yellowlegs

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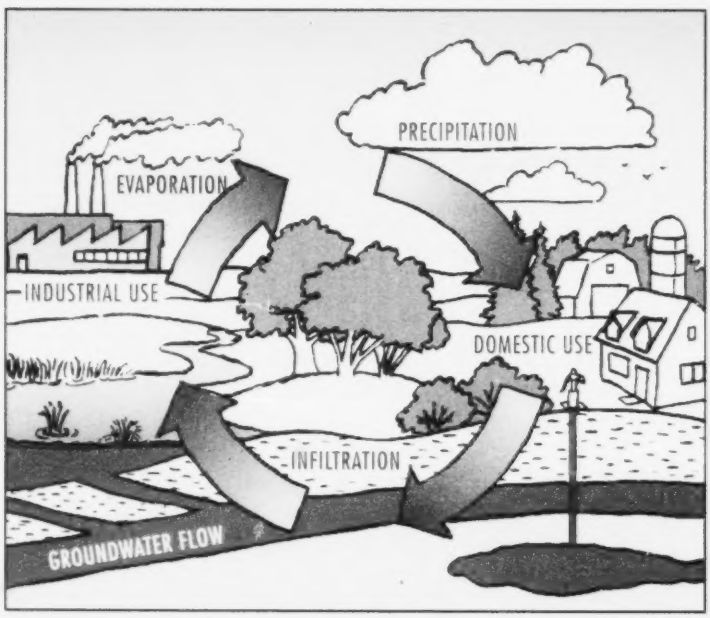

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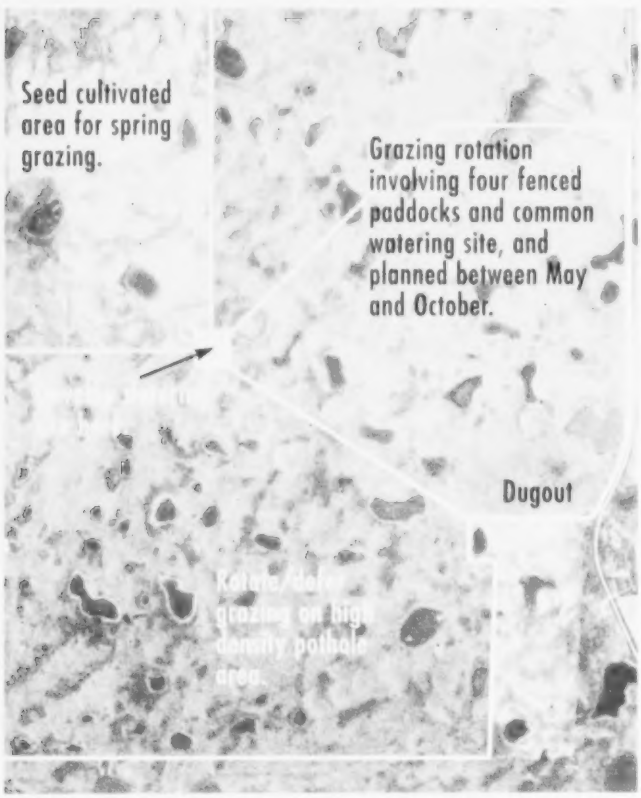
Seed cultivated area for spring grazing.
Grazing rotation involving four fenced paddocks and common watering site, and planned between May and October.
Dugout

Planned grazing on aerial photo.

Lesser yellowlegs

WETLAND VALUES

The Value in Vegetation

Wetlands work most effectively when the vegetation around the basin or stream is adequate (10 metres or 30 feet from water's edge). Vegetation around a slough provides quality hay for baling or livestock grazing and halts the movement of salts into cropland, stopping the spread of salinity which ultimately reduces crop yields.

Vegetation around sloughs also retards soil erosion caused by abundant wind and water. Slough grasses like cattail, bulrush, and pondweed filter contaminants from the runoff which helps purify the groundwater. These grasses also gather winter's snow and offer excellent year-round habitat for wildlife.

The Water's Good, Too

The basins of wetlands conveniently pool runoff from rain or snow, lessening water erosion and allowing for a quiet filtering of contaminants from the water. As spongy storage and supply tanks, wetlands hold, release and transfer water, ultimately breaking the harsh effects of flooding and drought. Slough basins are also a water source for livestock, field spraying or irrigation.

Some wetlands allow groundwater to enter the surface basin, but most disburse water from the basin into the underground water system. This action, in turn, ensures quality water is available in man-made wells and flowing springs for farm and community use.

The Saskatchewan Wetland Conservation Corporation acknowledges the contributions of the following partners: Agriculture and Agri-Food Canada - Canada Millennium Partnership Program - Canadian Wildlife Service and World Wildlife Fund - Ducks Unlimited Canada - Environment Canada - Government of Canada - National Fish and Wildlife Foundation (U.S.) - Nature Conservancy of Canada - Saskatchewan Environment and Resource Management - SaskPower/Shand Greenhouse - TD - Canada Trust Friends of the Environment Foundation - Wildlife Habitat Canada - World Wildlife Fund.

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